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Functional ingredients from *S. latissima* for cosmetic applications

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Abstracts

Studies have shown that brown seaweed contains a wide range of bioactive compounds. Hence, brown algae extracts may potentially be applied in facial cream formulations as a functional ingredient e.g. contributing with antioxidant and anti-aging activity. Moreover, the antioxidant activity of brown algae extract can also increase the oxidative stability, and thereby, protect lipids which are prone to oxidation.

In an ongoing project, MAB4, the overall aim is to establish a sustainable production of ingredients derived from the brown alga *Saccharina latissima*. One of the objectives of this project is to extract highly antioxidative compounds from *S. latissima* and find application for these extracts in facial cream. Hence, different *S. latissima* extracts (extract solution) were produced using GRAS (generally recognized as safe) extraction media such as ethanol (96, 70 and 50% v/v) or water and the anti-aging capacity and antioxidant properties were evaluated *in vitro*. Furthermore, the extracts were characterized based on composition of bioactive compounds influencing the antioxidant activity.

Preliminary results from this study showed that the antioxidant properties *in vitro* were highly dependent on the extraction media. The water extract showed the highest metal chelating ability with an EC50 value of 0.55±0.03 mL extract/mL water. An opposite trend was observed for the reducing power and DPPH radical scavenging capacity. These preliminary results show the potential of developing high value ingredients derived from *S. latissima*.

Speaker: Ditte B. Hermund food scientist and postdoctoral at the National Food Institute. Research area is extraction, characterization and application of bioactive compounds derived from brown algae.